

ABSTRACT

A micro-electromechanical optical switch assembly is provided for an optical network. The switch assembly includes arrays of input and output optical fibers and optical components for selecting light paths that connect any selected pair of input and output fibers. The optical components include optical switching elements, such as torsionally supported micromechanical mirrors that are electrostatically actuated to rotate to direct the light beam along the desired light path. The mirrors are bulk micromachined into a semiconductor wafer, preserving their optical qualities, and formed into a chip mated to a cover. The package incorporates alignment elements to ensure correct position and orientation of the optical components in the package.

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